



CITY OF HAYWARD AGENDA REPORT

Meeting Date 4/14/05
Agenda Item 3

TO: Planning Commission

FROM: Erik J. Pearson, AICP, Associate Planner
Andrew S. Gaber, P.E., Development Review Engineer

SUBJECT: **Zone Change No. PL-2004-0418 & Vesting Tentative Tract Map 7554/PL-2004-0417 –Arlene Utal for Chabot Estate Homes (Applicant)/ Greg Silva (Owner) – Request to Change the Zoning From a Single-Family Residential (RS) District to a Planned Development (PD) District and Subdivide 2 Acres to Build 11 New Homes and Renovate the Existing Home**

The Project Location Is 2141 W. Jackson Street at the End of Cryer Street Near Chabot College.

RECOMMENDATION

Staff recommends that the Planning Commission find the project exempt from the California Environmental Quality Act, deny the zone change application and Preliminary Development Plan and deny the Vesting Tentative Tract Map application, subject to the attached findings.

BACKGROUND

The Penke-Cryer property is a portion of what was originally a 163-acre farm dating back to 1858. The property is occupied by a house, a carriage house/caretaker's house, a toolhouse/laundry room, a three-car garage and a tankhouse or water tower. A historic assessment prepared in May 2004 found that all structures, with the exception of the garage have historic value. The historic farm house was built in 1897 for newlyweds John Penke and Pamela Oliver and was the second house on the property. Most of the farm was sold to developers in the 1950s and the original house was destroyed by fire in 1958. The remaining 2.01-acre parcel is now bordered by the on-ramp from Hesperian Boulevard to Highway 92 along the southeast side, to the north is the Mt. Eden Presbyterian Church and Lea's Christian School and to the west are single-family homes on Adrian Avenue.

DISCUSSION

The applicant has requested to change the zoning of the property from a Single-Family Residential (RS) District to a Planned Development (PD) District to allow the subdivision of the 2-acre parcel into 12 lots for the construction of 11 new homes. The historic house would be on a 13,882-square-foot lot and the remaining 11 lots would range in size from 3,772 square feet to 7,021 square feet.

General Plan/Neighborhood Plan

The property has a General Plan land use designation of Low Density Residential, which allows up to 8.7 dwelling units per net acre. The proposed subdivision would have a density of approximately 8.4 dwelling units per net acre. One strategy listed in the Parks and Open Space section of the Neighborhood Plan states, "Preserve park-like setting of Penke/Cryer estate and other significant stands of trees in the course of development if the trees are healthy." The Plan also identifies the project site as a possible park site, but recognizes that access to the site is less than desirable. Staff spoke with the Hayward Area Recreation and Park District's General Manager who said that the property does not meet the District's requirements for a park site.

Noise

The text of the General Plan relating to noise and pertinent appendix are attached. Appendix N of the General Plan contains the Guidelines for the Review of New Development where it states that:

"New development projects shall meet acceptable noise level standards. The "acceptable" noise standards for new land uses as established in Land Use Compatibility for Community Exterior Noise Environments (see Figure 1) shall be used with further consideration of the following:

The maximum acceptable exterior noise level in residential areas is an L_{dn} of 55 decibels (dB) for single-family development and an L_{dn} of 60 dB for multi-family development. These levels shall guide the design and location of future development, and are the goals for the reduction of noise in existing development. These goals will be applied where outdoor use is a major consideration (e.g. backyards in single-family housing developments and recreation areas in multi-family housing projects). The outdoor standard will normally be applied to any area considered to be "useable open space", including decks and balconies associated with apartments and condominiums."

Irrespective of the discussion within the General Plan that specifically speaks to 55 as being the maximum noise level, Figure 1 in Appendix N is a table indicating that the maximum noise level that is "normally acceptable" is 60 dB. The back yard of a single-family house is a place where children should be able to play for extended periods of time or adults enjoy a meal without being subjected to loud noises. A noise analysis prepared by Charles M. Salter Associates, Inc. found that 3 of the 11 proposed homes, in addition to the existing home would have rear yards that would exceed the outdoor noise guidelines for single-family homes. The consultant estimates that the rear yards of Lots 1, 10 and 11 would have a noise level of approximately 63 dB and Lot 12 would continue to exceed 60 dB. Therefore, one third of the total of 12 homes would exceed the higher guideline of 60 dB and all of them exceed the guideline of 55 dB indicated as acceptable in the discussion in the General Plan. Because all the proposed homes are two-story, Lots 1, 10, 11 would block the noise for the other lots. If Lots 1, 10 and 11 were eliminated, then Lots 2, 3 and 9 may have yards exceeding the noise limit. Staff has found that the traffic noise from the freeway is considerable and makes it necessary to raise one's voice to carry on an outside conversation even when standing near the sound wall.

It is the opinion of the acoustical consultant that no alternative site design could adequately reduce noise levels in the yard areas. In staff's opinion, the site is not appropriate for single-family development given the proposed layout.

Staff suggested the applicant explore other options for developing the property, including attached units or creating usable group open space in an area where noise is not excessive, however they chose to pursue the current proposal indicating that the neighborhood prefers detached homes and that it would not be economically feasible to lose any units. The developer indicates that because they are asking for a Planned Development, that exceptions to development standards, including noise, can be made. However, the types of exceptions typically granted are those for lot size, setbacks or building separation, or size of open space provided. In this case, most of the proposed lots have less than the 5,000 square feet typically required for single-family homes. This exception is offset by the fact that the historic house to be renovated would be maintained on a historically appropriate larger lot.

Findings required to approve a Zone Change, Planned Development and Tentative Tract Map include a finding of consistency with the General Plan. Because of the potential nonconformance raised by the noise levels, staff is unable to recommend approval of the project.

While staff cannot support the project due to noise impacts, there are other aspects of the project, irrespective of noise, that merit consideration and are discussed below.

Open Space

Each proposed house would have a fenced yard area. Although the applicant is requesting a zoning change to PD, which allows some flexibility, the underlying RS zoning is used as the basis for development standards. While the RS zoning requires 20-foot deep rear yards, Lots 10 and 11 have rear yards only 15 feet deep. A group open space is normally required in a project where 20-foot rear yards are not provided for all homes, but none is proposed. If the water tower were left in place, the area of the proposed Lot 8 would make an attractive open space that would have a noise level of 60 dB.

Other nearby recreational opportunities include the Rancho Arroyo Park & Mount Eden Little League Fields on Depot Road, the Eden Gardens Elementary School and Chabot College are close by and would provide additional recreational opportunities for residents of the project. In addition, if the project were approved, the applicant would be required to pay park in-lieu fees to help pay for new facilities in the area.

Architecture

The proposed homes range in size from 2,287 square feet to 2,410 square feet. There are two models, each with two architectural schemes. Both plans are two stories, have four bedrooms and an attached two-car garage. All four elevations have front porches and have been designed with Victorian elements to complement the historic farmhouse.

Technically the houses meet the Design Guideline of limiting the garage to no more than 50 percent of the front elevation, however, this is accomplished only by wrapping the front porch around and in front of a portion of the garage. This does not meet the intent of providing more living space at the front of a house where people can watch the street. If Lot 1 were eliminated as discussed below, then Lots 2 through 5 could be made wider to increase the width of the living area on the front elevation.

In staff's opinion, the historic house should be the primary feature of the project, but plans show that upon entering the development site a garage would be the first structure to be viewed. To prevent one's view when entering the project from being dominated by garages, Lots 9 through 11 could have garages accessed from the rear of the lots and the detached garage on Lot 12 could be relocated to the rear of the lot. This would require the elimination of Lot 1. This would also allow the possibility for a walking path along west property line of Lot 12 behind the historic house so that people could walk more directly from the end of Cryer Court to the entrance/exit of the project. Given the fact that there is no sidewalk proposed along Cryer Court, the path would also allow a safer way for people to get to the public sidewalk on Cryer Street. Although these changes would make the project more attractive, the noise problem would remain.

Parking/Circulation

The project has been designed with a total of 63 parking spaces, or 5.25 parking spaces per unit. The two-car garages would account for 24 of the spaces, the driveways would accommodate 23 spaces and the remaining 16 spaces are parallel parking spaces on what would be known as Cryer Court. Lot 11 is the only lot where there is not room for parking of two cars in the driveway. This house has been shifted closer to the street to allow room for a turn-around area on Lot 1. Lot 11 has an additional driveway on the side for parking one car. This is an undesirable parking arrangement and is one of the indications that there are too many lots proposed for the property. This layout also requires the garage on Lot 11 to be only 5 feet from the street and for the garage to be on the left side, making it the first visible element of the house when entering the project.

Building Separation/Setbacks

All proposed homes would be separated by at least 10 feet and all structures meet the setbacks required by the RS zoning with a few exceptions. The proposed house on Lot 5 would be only 5 feet from the side property line where 10 feet would normally be required, however this property line abuts the rear of the church where there are accessory structures scattered along the fence, so the reduced setback is not expected to negatively impact the adjacent property. Also, as discussed above, Lots 10 and 11 are designed with rear yards with less than the 20-foot setback required by the RS zoning and Lot 11 has only a 5-foot front yard setback where 20 feet is required.

Trees & Landscaping

The project would require the removal of 19 of the 33 trees on the site. If the project is approved, replacement trees totaling in value equal to those removed would be required to be planted throughout the site. All the trees to be removed have been rated as being in moderate to poor health and structure with the exception of three trees (labeled as 24, 40 and 41 on Sheet L-1 of the plans). According to the City Landscape Architect, these trees would not be compatible with residential development.

Two story homes are being proposed under the dripline of three other trees (labeled as 18, 19 and 20). The pruning that would be necessary to build the homes would create a tree canopy unacceptable to the City. Although the trees, in the short term, might survive the major pruning, they would look unnatural in form and the long term damage to such trees is difficult to assess. In the past, the City has received complaints from neighbors when this type of extensive pruning

occurs. City Design Guidelines discourage the construction of structures within the dripline of existing trees. It should be noted that these three trees are located along the western property line of the project site and have canopies that extend into lots on Adrian Avenue. Staff recommends any development of the site avoid construction within the dripline of the trees.

The developer is proposing to construct a grassy swale along the soundwall to meet Clean Water Program requirements to filter stormwater before it enters the City system. This swale must be designed to meet accepted standards for width, depth and flow capacity to ensure runoff is filtered properly, and that runoff from large storms will be contained within the swale.

The City requires trees to be planted at the perimeter of the site, but the trees along the sound wall would need to be planted in the swale to provide adequate clearance from the wall. Given the width of the planter and swale, the trees when mature would impede the flow of runoff. The swale and bench would have to be wider to accommodate both the trees and provide the necessary slope and depth for stormwater. Finally, the landscape bulb-outs along the sound wall do not meet the minimum interior width of 5 feet required for street trees. The swale, perimeter and street trees could be accommodated, but would result in the elimination of the visitor parking along the private street. Staff recommends the swale be made larger without losing the visitor parking.

Schools & Transportation

Were the project to be constructed, the children generated from the 12 homes would attend Eden Gardens Elementary School (4.8 students), Anthony W. Ochoa Middle School (1.1 students) and Mount Eden High School (2.5 students). Pursuant to California Code Sections 65996 and 65997, the current state law governing financing of new school facilities in California, payment of school impact fees to the school district represents acceptable mitigation of school impacts.

AC Transit bus routes 92, 97 and the M line, collectively providing service to BART stations, Southland Mall and CSUH and Foster City, all stop at Chabot College, which is within walking distance of the project.

Tract Map

The proposed subdivision shows 13 parcels, 12 single-family lots and 1 lot for the private street and common area adjacent to the sound wall. The homeowners' association would own the private street and common area, and would be responsible for maintenance of these areas.

There are existing utilities crossing the site and within Adrian Ave., including sanitary sewer, water and storm drains, with sufficient capacity to serve the proposed project. The project developer would be responsible to construct a standard street intersection where the private street intersects Adrian Ave., as well as construct the private street within the development.

ENVIRONMENTAL REVIEW

The proposed project is Statutorily Exempt from the California Environmental Quality Act (CEQA) guidelines, pursuant to Section 15270, *Projects which are Disapproved*. If the Planning Commission is supportive of the application, environmental review is required before endorsement of the plan.

PUBLIC NOTICE

On October 4, 2004, a Referral Notice was sent to every property owner and occupant within 300 feet of the subject site, as noted on the latest assessor's records. Notice was also provided to the Mount Eden Neighborhood Task Force, Eden Garden-Parkwest Homeowners' Association.

A neighborhood meeting was held on October 14, 2004 to solicit comments on the project. Six neighbors attended the meeting and raised the issues of tree preservation, traffic, construction traffic, the ability for emergency vehicles to access the site and construction noise and hours. With the exception of the case where construction is proposed within the driplines of three trees, the healthy trees that appropriate for a residential neighborhood are being preserved. The proposed project is not large enough to warrant a traffic analysis. If the project is approved, conditions of approval could be included to place controls on construction traffic, noise and hours. The site design meets the requirements of the Fire Department for truck access and turn-around.

On April 4, 2005 a Notice of Public Hearing for the Planning Commission meeting were mailed. In addition, a public notice sign was placed at the site prior to the Public Hearing to notify neighbors and interested parties residing outside the 300-foot radius.


CONCLUSION

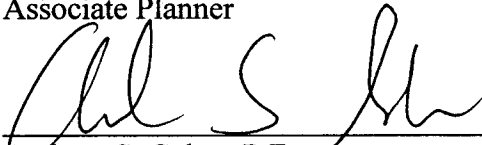
Staff appreciates the effort the applicant has made to preserve and restore the historic structures on the property, however staff cannot support the project due to the noise levels that the residents would be exposed to while spending time in their private yards. In addition to the noise, other problems identified by staff include:

- A better effort should be made to protect the healthy trees on the site;
- The homes could be made more attractive by further de-emphasizing garages as they would be viewed from the street;
- Either larger yards or a group open space should be provided;
- Either an insufficient turn-around on Lot 1 or an unattractive driveway on Lot 11; and
- Grassy swale should be made more functional.


If the Planning Commission supports the project staff would conduct CEQA review and prepare findings and conditions, which the Commission would then recommend to the City Council. If the Planning Commission denies the application, the applicant may appeal the decision to the City Council. Otherwise, a new application with a substantially different plan may be submitted at any time. Regardless of the outcome of the proposed project, staff will initiate the procedure to include the historic house on the City's list of historically significant buildings.

Prepared by:


Erik J. Pearson, AICP
Associate Planner

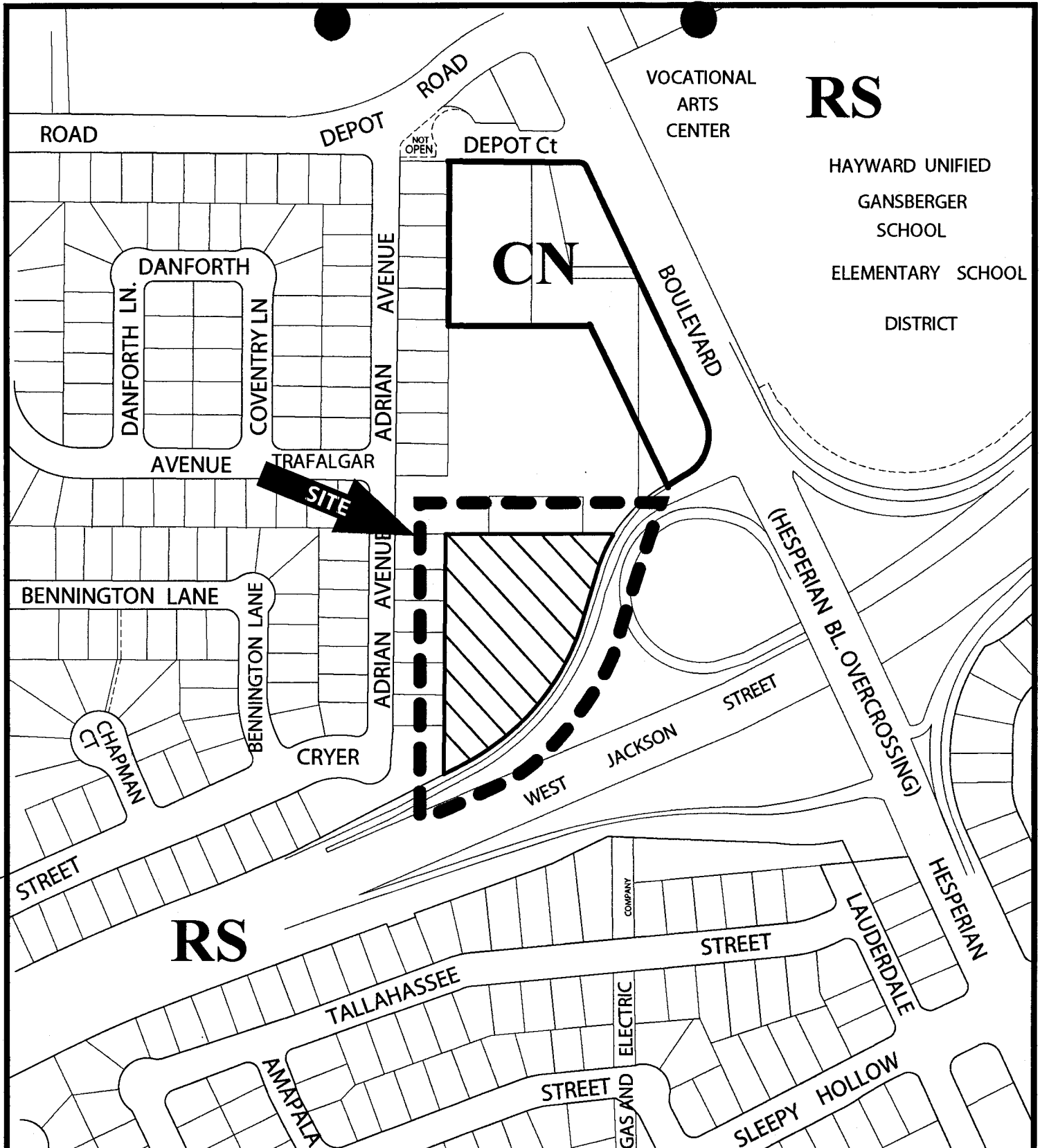

Andrew S. Gaber, P.E.
Development Review Engineer

Recommended by:


Dyana Anderly, AICP
Planning Manager

Attachments:

- A. Area & Zoning Map
- B. Findings for Denial of Zone Change and Preliminary Development Plan
- C. Findings for Denial of Vesting Tentative Tract Map
- D. Noise Analysis
- E. Appendix N of the General Plan
Plans



RS

HAYWARD UNIFIED
GANSBERGER
SCHOOL
ELEMENTARY SCHOOL
DISTRICT

VOCATIONAL
ARTS
CENTER

CN

RS

Area & Zoning Map

PL-2004-0417 TTM 7554

Address: 2141 West Jackson Street

Applicant: Arlene Utal

Owner: Greg Silva

CN-Neighborhood Commercial
RS-Single-Family Residential,RSB4,RSB6



**CITY OF HAYWARD
PLANNING DIVISION
ZONE CHANGE DENIAL**

April 14, 2005

ZONE CHANGE APPLICATION NO. PL-2004-0418: Arlene Utal for Chabot Estate Homes (Applicant)/ Greg Silva (Owner) – Request to Change the Zoning From an Single-Family Residential (RS) District to a Planned Development (PD) District and Subdivide 2 Acres to Build 11 New Homes and Renovate the Existing Home

The Project Location Is 2141 W. Jackson Street at the End of Cryer Street Near Chabot College.

Findings for Denial – Preliminary Development Plan:

- A. Denial of Zone Change Application No. 2002-0533, is Statutorily Exempt from the California Environmental Quality Act (CEQA) guidelines, pursuant to Section 15270, *Projects which are Disapproved.*
- B. The development is not in substantial harmony with the surrounding area and potentially does not conform to the General Plan, the Mount Eden Neighborhood Plan and applicable City policies in that the existing noise levels at the site exceed the guidelines in the Plan that are set forth to ensure compatibility with single-family residential development.
- C. The development does not create a residential environment of sustained desirability and stability in that the project would create outdoor spaces that would exceed the normally acceptable limit of 60 decibels, there are substandard yards, there is too much visual emphasis on garages and the grassy swale would not be functional.
- D. Any latitude or exception(s) to development regulations or policies is not adequately offset or compensated for by providing functional facilities or amenities not otherwise required or exceeding other required development standards. The exception for reduced lot sizes is offset by the renovation of the historic house on a larger lot. The exceptions for reduced front and rear yard setbacks are not compensated.

Findings for Denial – Zone Change:

- E. Substantial proof does not exist that the proposed change will promote the public health, safety, convenience, and general welfare of the residents of Hayward in that the Planned Development Zoning would allow a project creating outdoor spaces with high noise levels.
- F. The proposed change is potentially not in conformance with the purposes of this Ordinance and all applicable, officially adopted policies and plans in that the homes would be exposed to noise levels exceeding the guidelines set forth in the General Plan.

ATTACHMENT B

FINDINGS FOR DENIAL VESTING TENTATIVE TRACT MAP 7554

The State of California Subdivision Map Act, Government Code Section 66474¹, states the grounds for denial of a tentative map. The proposed vesting tentative tract map can be denied based on the following findings:

1. The vesting tentative tract map potentially does not conform to the General Plan and the City of Hayward Zoning Ordinance. The proposed project does not meet the noise guidelines as set forth in the General Plan.
2. The site is not physically suitable for the proposed development, since the four of the 12 lots would have outdoor spaces exceeding maximum noise levels set forth in the General Plan guidelines.
3. The design of the subdivision and the proposed improvements may cause health problems due to noise levels that people would be subjected to while in their private yards.

¹ The findings of Section 66474 set forth the grounds for denial of a tentative map which are as follows:

- (a) That the proposed map is not consistent with applicable general and specific plans as specified in Section 65451.
- (b) That the design or improvement of the proposed subdivision is not consistent with applicable general and specific plans.
- (c) That the site is not physically suitable for the type of development.
- (d) That the site is not physically suitable for the proposed density of development.
- (e) That the design of the subdivision or the proposed improvements are likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.
- (f) That the design of the subdivision or type of improvements is likely to cause serious public health problems.
- (g) That the design of the subdivision or the type of improvements will conflict with easements, acquired by the public at large, for access through or use of, property with the proposed subdivision.

ATTACHMENT C

29 November 2004

Arlene Utal
Next Bay Properties
712 Bancroft Road, Suite 118
Walnut Creek, CA 94598
Fax: 925.939.6833

Subject: Chabot Estate Homes -- Acoustical Consulting
CSA Project No. 04-0513

Dear Arlene:

This letter summarizes our environmental noise analysis for the subject project. The development, located northwest of both the Hesperian Boulevard to westbound State Route 92 on-ramp and 13 foot-tall Caltrans sound wall, would consist of 11 new single-family homes. An existing house (Lot 12) at the southern end of the site would be renovated, and refitted with sound-rated windows. In summary, the project site is exposed to highway noise levels that would be considered "normally acceptable" to "conditionally acceptable." Sound-rated windows and/or exterior doors would be required for most of the homes to meet the City's indoor noise standard.

ACOUSTICAL GOALS

The City of Hayward has outdoor noise goals as part of the Conservation and Environmental Protection Element of their General Plan. Figure 1 of Appendix N is the "Land Use Compatibility Standards for Community Noise Environments." For single-family residential land uses, a DNL¹ of no more than 60 dB is considered "normally acceptable," where the "specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special insulation requirements." A DNL between 55 and 70 dB is considered "conditionally acceptable," where "new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements are made and needed noise insulation features included in the design." Besides the noise standards established in this figure, Appendix N also suggests achieving an outdoor noise goal of DNL 55 dB in backyards of single-family homes. Additionally, indoor noise levels shall not exceed DNL 45 dB in new housing units.

¹ Day-Night Average Sound Level (DNL or L_{dn})--The A-weighted noise level which corresponds to average human sensitivity to sound. The DNL sound level corresponds to an energy average during a 24-hour period. A 10-decibel penalty is applied during the hours of 10 pm to 7 am due to increased human sensitivity during the night. An A-weighting is applied to the microphone signal to approximate human sensitivity to different frequencies, i.e., pitch.

Arlene Uta1
29 November 2004
Page 2

For your information, achieving an outdoor noise goal of DNL 55 dB is considered very stringent. Most City's in the San Francisco Bay Area allow for an outdoor DNL between 60 and 65 dB, and occasionally up to 70 dB. The City of Hayward recognizes "that there will likely continue to be infill projects where noise sensitive land uses are proposed in areas where noise levels exceed those considered normally acceptable for the intended use. The policies and standards set forth in the Noise Element are sufficient to address these planning issues and mitigate any potential impacts to a less than significant level." We interpret that though the City would like applicants to consider the stringent outdoor noise goal, the actual outdoor noise standards are summarized in the Figure 1 land use compatibility standards. As the City recognizes the need for "infill" project, we assume that DNL 55 dB is only a suggested goal, as opposed to a standard.

NOISE MEASUREMENTS

On 18 to 19 November 2004, we conducted two 24-hour noise measurements and three short-term noise measurements to document the noise environment. The primary noise source heard on-site is S.R. 92. Other noise sources include general aviation activity and Hesperian Boulevard. Table 1 summarizes the results of the measurement program:

Table 1: Noise Measurement Results			
Site	Location	Date/Time	DNL
1	195 feet north of S.R. 92 centerline, 70 feet north of sound wall, 70 feet east of western property line, and 11 feet in tree by existing house on Lot 12.	18-19 November 2004 1:00 p.m. start time	68
2	195 feet north of S.R. 92 centerline, 110 feet east of western property line, and 16 feet above site elevation (Lot 12).	18 November 2004 1:15 to 1:45 p.m.	70*
3	220 feet north of S.R. 92 centerline, 135 feet east of western property line, 5-1/2 feet above site elevation, and southern corner of proposed Lot 11 house.	18 November 2004 1:45 to 2:00 p.m.	65*
4	300 feet north of S.R. 92 centerline, 50 feet west of on-ramp centerline, 15 feet south of northern property line, and 5-1/2 feet above site elevation (Lot 8).	18 November 2004 1:15 to 1:30 p.m.	68*
5	305 feet north of S.R. 92 centerline, behind existing carriage house, and 5-1/2 feet above site elevation (Lot 10).	18-19 November 2004 2:00 p.m. start time	61

*Estimated DNL based on simultaneous short-term monitoring at Site 1.

The measurement at Site 1 near the existing house on Lot 12 was the control location. The measurement at Site 2 represents the current noise exposure to the second floor of the existing house on Lot 12. The measurement at Site 3 represents the exposure to the first

Arlene Utal
29 November 2004
Page 3

floor of future home on Lot 11. The measurement at Site 4 represents the exposure to the backyard of the future home on Lot 10, and includes the acoustical shielding that would be provided by the building structure. The measurement at Site 5 represents the exposure to the backyard of the home on Lot 8 with no acoustical shielding of S.R. 92 on-ramp or Hesperian Boulevard noise. As indicated by the measurement data, the majority to the site is currently exposed to noise levels considered "conditionally acceptable" by the Figure 1 land use compatibility guidelines.

Discussion/Recommendations

Outdoors: We understand that the current plan is to extend the highway sound wall to acoustically shield the homes on Lots 7 and 8 from S.R. 92 highway noise. The backyards of these homes are also exposed to Hesperian Boulevard noise from the north. We determined that the sound wall should be at least 10 feet tall along the western property line to achieve DNL 60 in the backyards. For the northern property of Lot 8, the sound wall should start at 9 feet tall and step down to 8 feet at the midway point. Sound walls that are 8 feet and taller should probably be constructed of masonry. At the northern property line of Lot 7, the noise barrier should be 7 feet tall and step down to 6 feet at the midway point. This part of the noise barrier could be constructed of wood that is free of cracks and gaps.

Based on our measurements, and assuming the aforementioned sound walls and noise barriers, we determined that all backyards of new homes, except at Lots 1, 10, and 11, would have a DNL no more than 60 dB. The proposed 2-story homes are laid out well on the current tentative map in that the building structures would also provide some acoustical shielding to the backyards. At Lots 1 and 11, we estimate that the DNL in the backyards would be approximately 63 dB. At Lot 10, the DNL would be approximately 61 dB. The other eight backyards would be exposed to a DNL that is considered "normally acceptable." A 3 dB increase in noise would be considered a barely noticeable increase.

Indoors: To meet the City's indoors noise standard of DNL 45 dB, sound-rated windows and exterior doors will be required at most of the homes. Our calculations are based on the information shown in the architectural drawings prepared by Dahlin Group. The following table summarizes these requirements.

Table 2: Recommended Sound Ratings		
Lot #(s)	Floor	Window STC Rating
10, 11 and 12	Second	33
	First	29
1, 8 and 9	Second	31
2 and 7	Second	28

At the first floor of homes on Lots 10, 11 and 12, STC 29 exterior doors would also be required. Sound-rated assemblies are not required for any other home at the project site. However, all project homes would need to have the windows in the closed position to

Arlene Ural
29 November 2004
Page 4

achieve the indoor noise standard. Therefore, an alternate source of ventilation (i.e., mechanical ventilation) may be required. Though we understand that air conditioning would be provided for each home, this aspect of the project should be reviewed by your mechanical engineer.

This concludes our noise analysis for the subject project. Please call if you have any questions.

Sincerely,

CHARLES M. SALTER ASSOCIATES, INC.

Michael D. Toy, P.E.
Principal Consultant

MDT/ch
P: 04-0513_04Nov29MDT_Chabot Estate Homes

Appendix N

NOISE GUIDELINES FOR THE REVIEW OF NEW DEVELOPMENT

Measurement of Noise

Noise may be defined as unwanted sound. Noise is usually objectionable because it is disturbing or annoying. The objectionable nature of sound could be caused by its pitch or its loudness. Pitch is the height or depth of a tone or sound, depending on the relative rapidity (frequency) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. Loudness is intensity of sound waves combined with the reception characteristics of the ear. Intensity may be compared with the height of an ocean wave in that it is a measure of the amplitude of the sound wave.

In addition to the concepts of pitch and loudness, there are several noise measurement scales which are used to describe noise in a particular location. A decibel (dB) is a unit of measurement which indicates the relative amplitude of a sound. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 decibels represents a ten-fold increase in acoustic energy, while 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, etc. There is a relationship between the subjective noisiness or loudness of a sound and its intensity. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities.

There are several methods of characterizing sound. The most common in California is the A-weighted sound level or dBA. This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This energy-equivalent sound/noise descriptor is called Leq. The most common averaging period is hourly, but Leq can describe any series of noise events of arbitrary duration. The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends upon the distance the receptor is from the noise source. Close to the noise source, the models are accurate to within about plus or minus 1 to 2 dBA.

Since the sensitivity to noise increases during the evening and at night --because excessive noise interferes with the ability to sleep --24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. The Community Noise Equivalent Level, CNEL, is a measure of the cumulative noise exposure in a community, with a 5 dB penalty added to evening (7:00 pm -10:00 pm) and a 10 dB addition to nocturnal (10:00 pm - 7:00 am) noise levels. The Day/Night Average Sound Level, Ldn, is essentially the same as CNEL, with the exception that the evening time period is dropped and all occurrences during this three-hour period are grouped into the daytime period.

Effects of Noise

Hearing Loss. While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise, but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise. The Occupational Safety and Health Administration (OSHA) has a noise exposure standard which is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over eight hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

Sleep and Speech Interference. The thresholds for speech interference indoors are about 45 dBA if the noise is steady and above 55 dBA if the noise is fluctuating. Outdoors the thresholds are about 15 dBA higher. Steady noise of sufficient intensity (above 35 dBA) and fluctuating noise levels above about 45 dBA have been shown to affect sleep. Interior residential standards for multi-family dwellings are set by the State of California at 45 dBA Ldn. Typically, the highest steady traffic noise level during the daytime is about equal to the Ldn and nighttime levels are 10 dBA lower. The standard is designed for sleep and speech protection and most jurisdictions apply the same criterion for all residential uses. Typical structural attenuation is 12-17 dBA with open windows. With closed windows in good condition, the noise attenuation factor is around 20 dBA for an older structure and 25 dBA for a newer dwelling. Sleep and speech interference is therefore possible when exterior noise levels are about 57 -62 dBA Ldn with open windows and 65- 70 dBA Ldn if the windows are closed. Levels of 55-60 dBA are common along collector streets and secondary arterials, while 65- 70 dBA is a typical value for a primary/major arterial. Levels of 75-80 dBA are normal noise levels at the first row of development outside a freeway right-of-way. In order to achieve an acceptable interior noise environment, bedrooms facing secondary roadways need to be able to have their windows closed, those facing major roadways and freeways typically need special glass windows.

Annoyance. Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that the causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The Ldn as a measure of noise has been

found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources. When measuring the percentage of the population highly annoyed, the threshold for ground vehicle noise is about 55 dBA Ldn. At an Ldn of about 60 dBA, approximately 2 percent of the population is highly annoyed. When the Ldn increases to 70 dBA, the percentage of the population highly annoyed increases to about 12 percent of the population. There is, therefore, an increase of about 1 percent per dBA between an Ldn of 60- 70 dBA. Between an Ldn of 70-80 dBA, each decibel increase increases by about 2 percent the percentage of the population highly annoyed. People appear to respond more adversely to aircraft noise. When the Ldn is 60 dBA, approximately 10 percent of the population is believed to be highly annoyed. Each decibel increase to 70 dBA adds about 2 percentage points to the number of people highly annoyed. Above 70 dBA, each decibel increase results in about a 3 percent increase in the percentage of the population highly annoyed.

Guidelines for the Review of New Development

A. New development projects shall meet acceptable noise level standards. The “acceptable” noise standards for new land uses as established in Land Use Compatibility for Community Exterior Noise Environments (see Figure 1) shall be used with further consideration of the following:

1. The maximum acceptable exterior noise level in residential areas is an L_{dn} of 55 dB for single-family development and an L_{dn} of 60 dB for multi-family development. These levels shall guide the design and location of future development, and are the goals for the reduction of noise in existing development. These goals will be applied where outdoor use is a major consideration (e.g., backyards in single-family housing developments and recreation areas in multi-family housing projects). The outdoor standard will normally be applied to any area considered to be “useable open space”, including decks and balconies associated with apartments and condominiums.
2. Indoor noise level shall not exceed an L_{dn} of 45 dB in new housing units.
3. If the primary noise source is aircraft or a railroad, noise levels in new residential development exposed to an exterior L_{dn} of 60 dB or greater should be limited to a maximum instantaneous noise level in bedrooms at night of 50 dB(A). Maximum instantaneous noise levels in bedrooms during the daytime and in other rooms should not exceed 55 dB(A).

4. If the primary noise source is a commercial or industrial land use, new residential development shall not be allowed where the ambient noise level due to commercial or industrial noise sources will exceed the noise level standards as set forth in Table 1. Each of the noise level standards specified in Table 1, "Noise and Land Use Compatibility Standards for Industrial and Commercial Noise", shall be reduced by 5 dB(A) for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises.
5. Appropriate interior noise levels in commercial, industrial, and office buildings are a function of the use of space and shall be evaluated on a case-by-case basis. Interior noise levels in offices generally should be maintained at 52 L_{eq} (hourly average) or less.

The noise guidelines and contours will be used to determine if additional noise studies are needed for proposed new development. Noise studies shall follow a standard format and guidelines.

B. Protect the noise environment in existing residential areas. The guidelines are not intended to be applied reciprocally. In other words, if an area currently is below the desired noise standards, an increase in noise up to the maximum should not necessarily be allowed. The impact of a proposed project on an existing land use should be evaluated in terms of the potential for adverse community response based on a significant increase in existing noise levels, regardless of the compatibility guidelines. Specific examples of these situations are described below:

1. The project has the potential to generate significant adverse community response due to the increased character of the noise it would generate.
2. Noise created by commercial or industrial sources associated with new project or developments shall be controlled so as not to exceed the noise level standards set forth in Table 1 as measured at any affected residential land use. The allowable noise level shall be adjusted up to the ambient noise level.

In general, the City will require the evaluation of mitigation measures for projects that would cause the L_{dn} to increase by 3 dB(A) or more at an existing residential area.

C. Locate noise sensitive uses away from noise sources unless mitigation measures are included in development plans. Protect schools, hospitals, libraries, churches, convalescent homes, and other noise sensitive uses from noise levels exceeding those allowed in residential areas.

D. Design city streets to reduce noise levels in adjacent areas. Continue to require soundwalls, earth berms, and other noise reduction techniques (e.g., "open grade" or "rubberized" asphalt) as conditions of development approval.

Figure 1

Land Use Compatibility Standards for Community Noise Environments

LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE L _{dn} OR CNEL, dB					
	55	60	65	70	75	80
RESIDENTIAL – LOW DENSITY SINGLE FAMILY, DUPLEX, MOBILE HOMES						
RESIDENTIAL – MULTI. FAMILY						
TRANSIENT LODGING – MOTELS, HOTELS						
SCHOOLS, LIBRARIES, CHURCHES, HOSPITALS, NURSING HOMES						
AUDITORIUMS, CONCERT HALLS, AMPHITHEATRES						
SPORTS ARENA, OUTDOOR SPECTATOR SPORTS						
PLAYGROUNDS, NEIGHBORHOOD PARKS						
GOLF COURSES, RIDING STABLES, WATER RECREATION, CEMETERIES						
OFFICE BUILDINGS, BUSINESS COMMERCIAL AND PROFESSIONAL						
INDUSTRIAL, MANUFACTURING UTILITIES, AGRICULTURE						

INTERPRETATION



NORMALLY ACCEPTABLE

Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.



CONDITIONALLY ACCEPTABLE

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.



NORMALLY UNACCEPTABLE

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.



CLEARLY UNACCEPTABLE

New construction or development should generally not be undertaken.

Table 1**Noise and Land Use Compatibility Standards***Adjustments to Ambient Noise Levels for Periodic Noise Events*

Maximum Cumulative Duration of Noise Event in Any One-Hour Period	Residential Exterior Noise Level Standards dB(A)	
	Daytime (7 AM- 10PM)	Nighttime (10PM- 7AM)
30 Minutes+	+5	0
15 Minutes+	+10	+5
5 Minutes+	+15	+10
1 Minute+	+20	+15
0-1 Minute	+25	+20

ADRIAN AVE

37 M 46

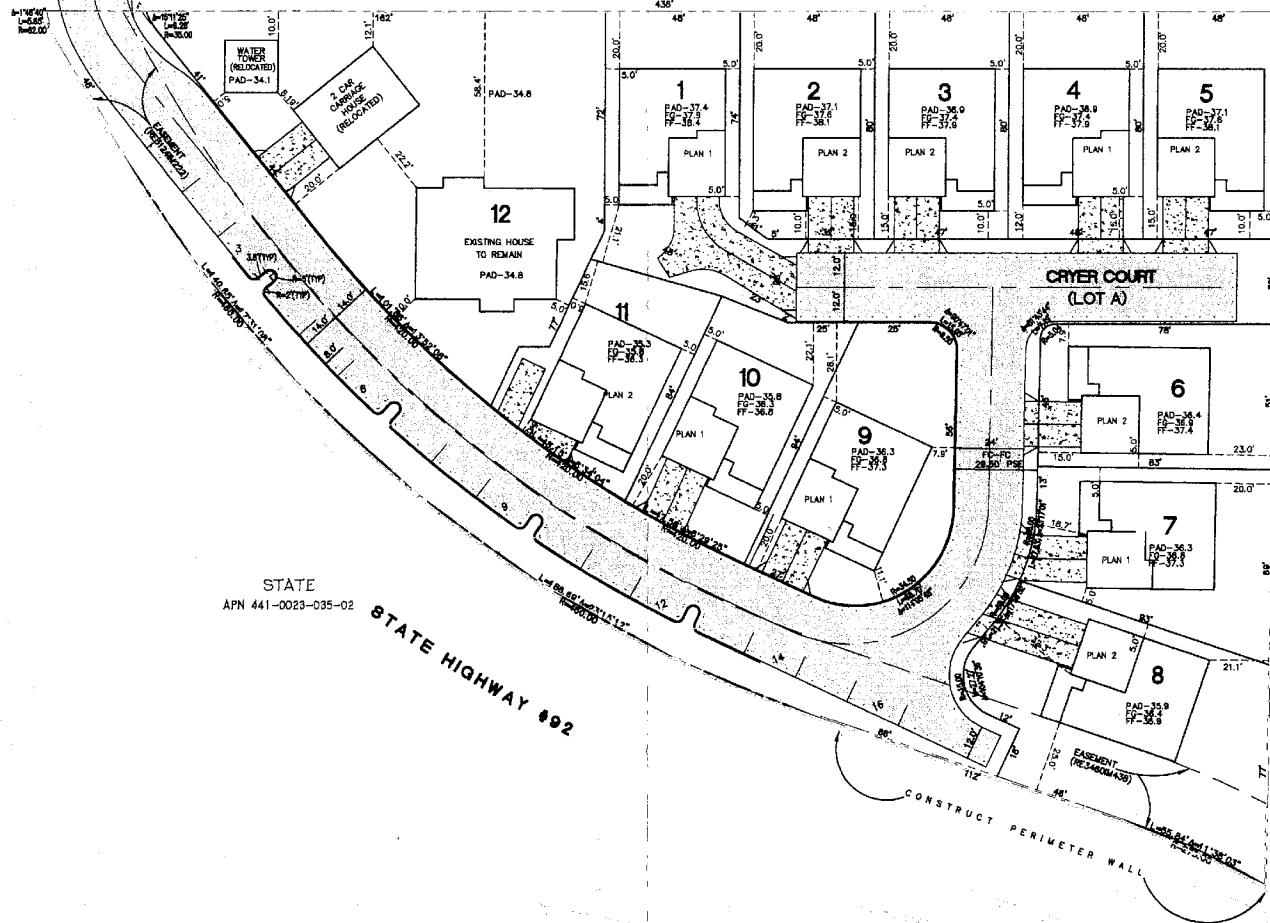
39 M 96

LOT 7 APN 441-0023-015 LOT 6 APN 441-0023-016 LOT 5 APN 441-0023-017 LOT 4 APN 441-0023-018 LOT 3 APN 441-0023-019 LOT 2 APN 441-0023-020 LOT 1 APN 441-0023-021

LOT 12 APN 441-0023-022

TRACT 1743

TRACT 1994



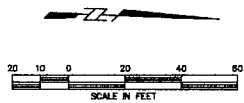
STATE
APN 441-0023-035-02

STATE HIGHWAY 892

CRIER COURT
(LOT A)

CONSTRUCT PERIMETER WALL

APN 441-0023-027-16
3.93 AC ± (P)



APPROVAL	
REVISIONS	DATE
NO.	BY
UDI-PETRAD CONSULTING ENGINEERS 1000 PLYMOUTH STREET SUITE 100 PLEASANTON, CA 94566 (925) 971-0218 FAX (925) 971-0218	
VESTING TENTATIVE MAP-13 CHABOT ESTATE HOMES TRACT 7554 HAYWARD, CALIFORNIA	
DESIGNED:	MAG
DRAWN:	MAG
CHECKED:	R.L.P.
SCALE:	1"=20'
DATE:	03-2005
SHEET NO.	2 OF 4

REVISIONS

CHABOT ESTATE HOMES
CRYER PROPERTY
HAYWARD, CALIFORNIA

STREET TREE
PLAN

DESIGNED	DATE
AJS	9-15-24
CHECKED	SCALE
JOB MT	

SHEET
L-1
W 2 SHEETS

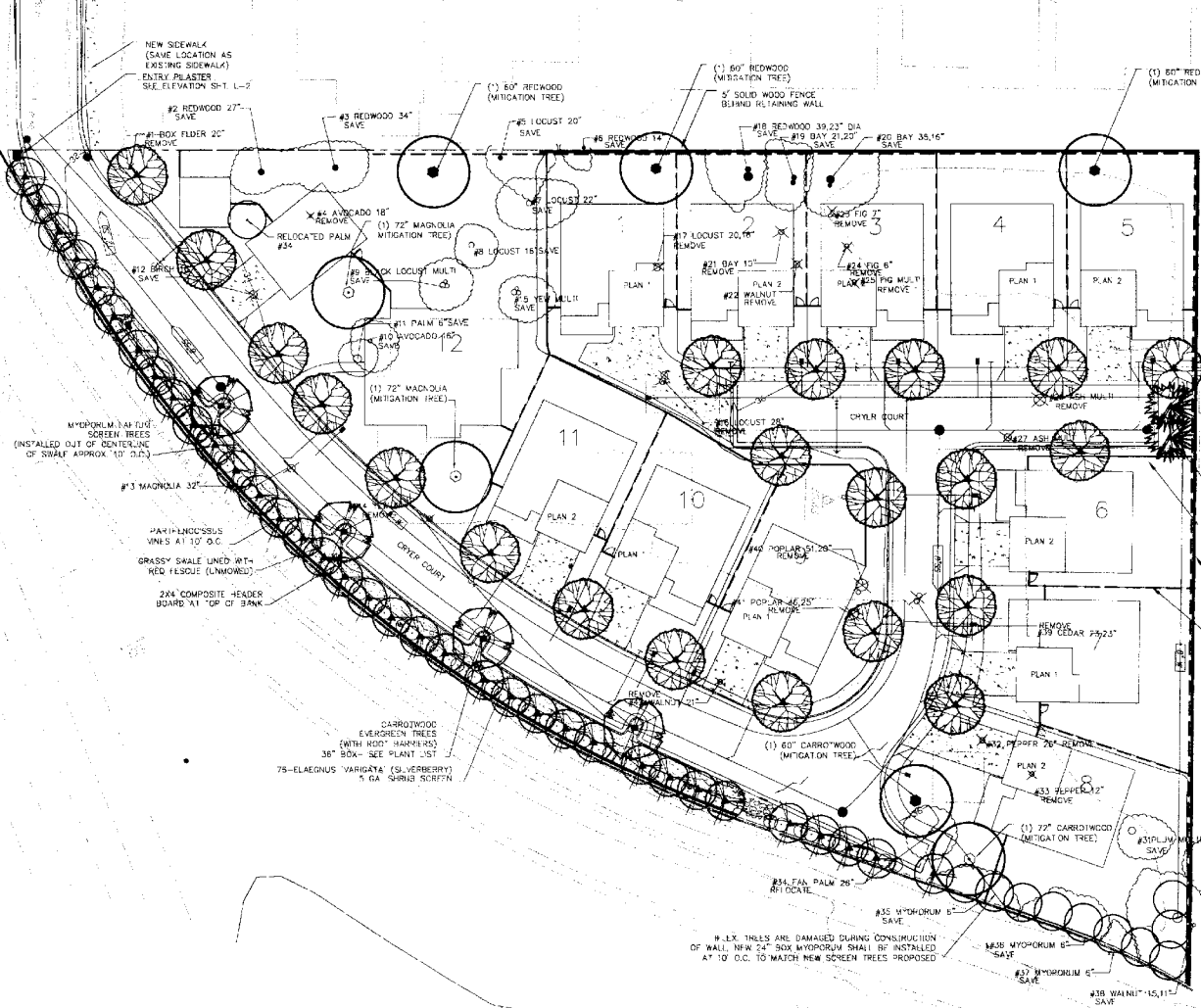
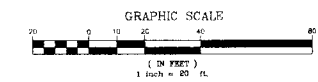
MAR 29 2005

STREET TREE LIST
TREES TO BE 24" BOX SIZE
INSTALL PER CITY DETAIL

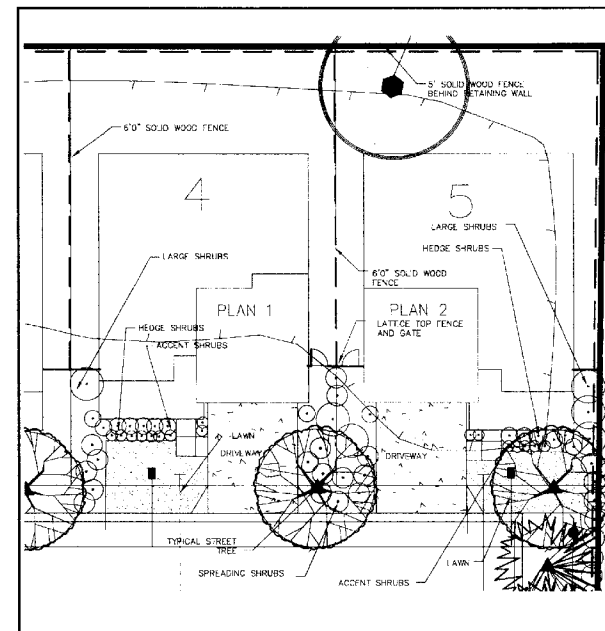
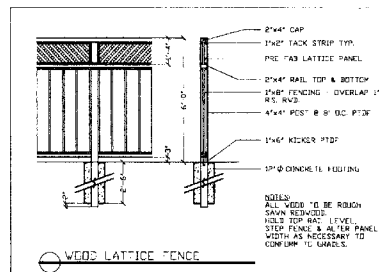
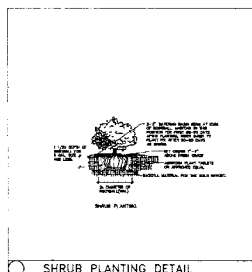
-  PISTACHIA CHINENSIS (CHINESE PISTACHE)
-  LAGERSTROMEA 'TUSCARORA' (GRAPE MYRTLE) (GRAPE MYRTLE)
- SCREEN TREES- TO BE BOX SIZE SEE PLAN
-  SEQUOIA SEMPERVIRENS (24") (COAST REDWOOD)
-  CUPANOPSIS ANACARDIODES (36" BOX) (CARROT WOOD)
-  MYOPORUM LAETUM STANDARD (24" BOX) (MYOPORUM)

MITIGATION TREES- SEE PLAN FOR SIZE AND LOCATIONS

- MITIGATION INFORMATION
TREES REMOVED:
- #4 AVOCADO: \$500
 - #1 BOX ELDER: \$300
 - #2 BIRCH: \$500
 - #3 MAGNOLIA: \$2650
 - #14 YEW: \$750
 - #17 LOCUST: \$700
 - #21 BAY: \$1000
 - #22 WALNUT: \$500
 - #24 FIG: \$300
 - #25 FIG: \$1050
 - #23 F.C. \$150
 - #16 LOCUST: \$1250
 - #76 ASH: \$350
 - #27 ASH: \$750
 - #40 POPLAR: \$600
 - #41 POPLAR: \$5750
 - #42 WALNUT: \$1250
 - #36 CEDAR: \$8050
 - #32 PLEPER: \$2150
 - #33 POPPER: \$500
- TOTAL REMOVED: \$36,350 FOR 19 TREES
- MITIGATION:
- (3) 72" BOX INSTALLED \$7000 EA = \$21,000
 - (4) 60" BOX INSTALLED \$4000 EA = \$16,000
 - (4) UP-SIZED SCREEN/STREET TREES TO 36" BOX = \$1600 DIFFERENCE
- TOTAL MITIGATION: \$38,600.00



P.L.X. TREES ARE DAMAGED DURING CONSTRUCTION OF WALL. NEW 24" BOX MYOPORUM SHALL BE INSTALLED AT 10' O.C. TO MATCH NEW SCREEN TREES PROPOSED



TYPICAL FRONT YARD LANDSCAPES
SCALE: 1"=10'0"

Technical drawing of an Entry Pilaster. The drawing shows a vertical column with a square base and a square top. The base is labeled "N.Y.C.S. BASE". The main body of the pilaster is labeled "23\" SQUARE PLASTER FRESH AIR 5005". Above the main body is a square section labeled "4\" N.Y.C.S. MOLDINGS - OPTIONAL". On top of this section is a circular object labeled "N.Y.C.S. 18\" D.A. P.C. 9058". The top of the pilaster is labeled "N.Y.C.S. PER CAP #103". The drawing includes dimensions: "18\" overall height" and "18\" overall width".

NOTE: IRRIGATION TO BE A COMBINATION OF SPRAY
(FOR LAWN)
AND DRIP (FOR SHRUBS) WITH AUTOMATED
CLOCKS WITH MULTIPLE START TIMES



CHABOT ESTATE HOMES
HAYWARD, CALIFORNIA

RECEIVED

MAR 30 2005

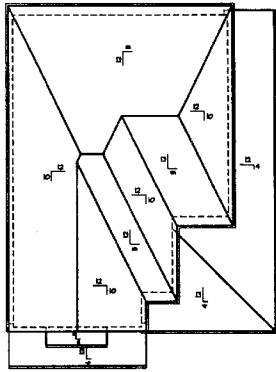
PLANNING DIVISION

January 12, 2005

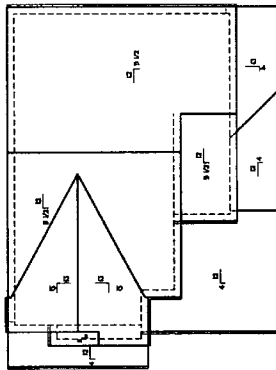
Project No.: 852.202

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ARCHITECTURAL
PLANNING

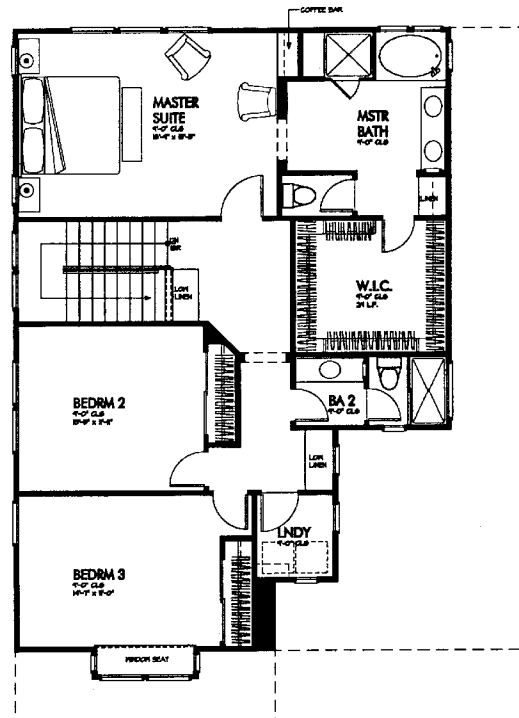
2671 Crow Canyon Rd.
San Ramon, CA 94583
925.837.8286
925.837.2543 fax



ROOF PLAN "A"
SCALE 1/8" = 1'-0"

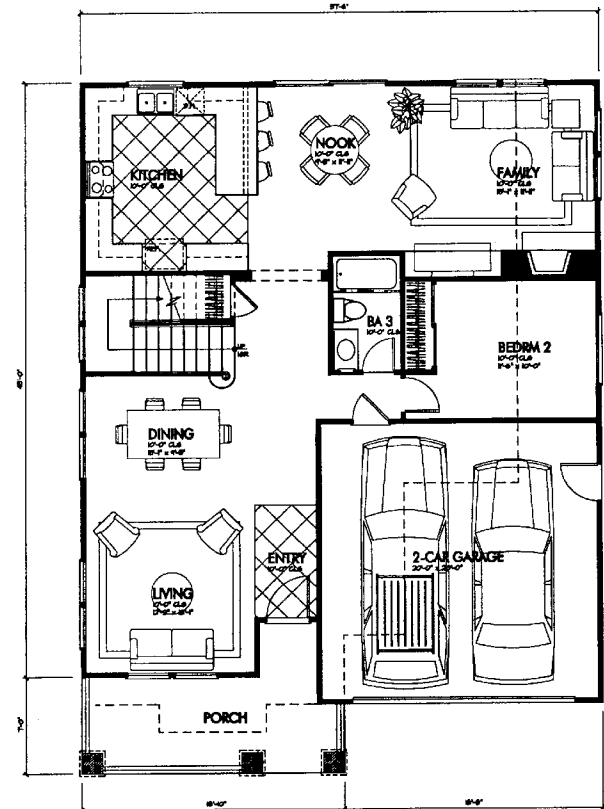


ROOF PLAN "B"
SCALE 1/8" = 1'-0"



SECOND FLOOR PLAN "A"

1100 sq. ft.
TOTAL: 2440 sq. ft.



FIRST FLOOR PLAN "A"

1224 sq. ft.
TOTAL: 2440 sq. ft.

CHABOT ESTATE HOMES

HAYWARD, CALIFORNIA

PLAN TWO

0 4 8 16
January 12, 2005 Project No.: 852.202

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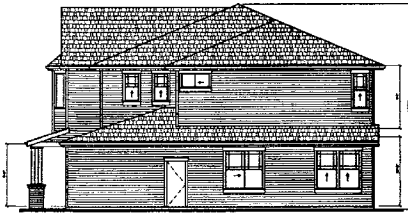
A.3
of 5



FRONT ELEVATION "B"

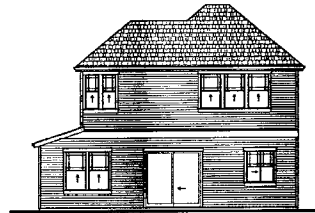


FRONT ELEVATION "A"



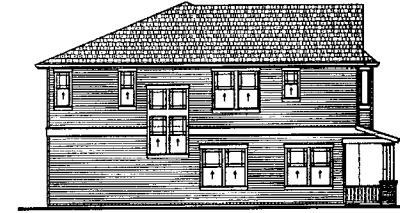
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SCALE: 1/8" = 1'-0"



REAR ELEVATION "A"

SCALE: 1/8" = 1'-0"



LEFT ELEVATION "A"

SCALE: 1/8" = 1'-0"

CHABOT ESTATE HOMES

HAYWARD, CALIFORNIA

ELEVATIONS PLAN TWO

0 4 8 16
January 12, 2005 Project No.: 852.202

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925.837.2543 fax

A.4
of 5



1156 sq. ft.
TOTAL: 2207 sq. ft.



1151 sq. ft.
TOTAL 2287 sq. ft.

FLOOR PLANS

PLAN ONE



September 17, 2004

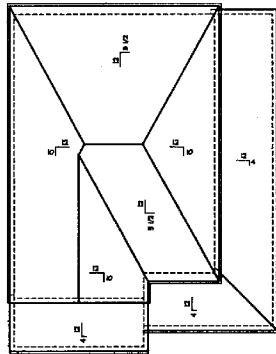
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ARCHITECTURE

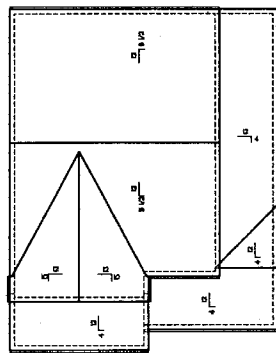
2671 Crow Canyon Rd.
San Ramon, CA 94583
925.837.8286
925.837.2543 Fax

CHABOT ESTATE HOMES

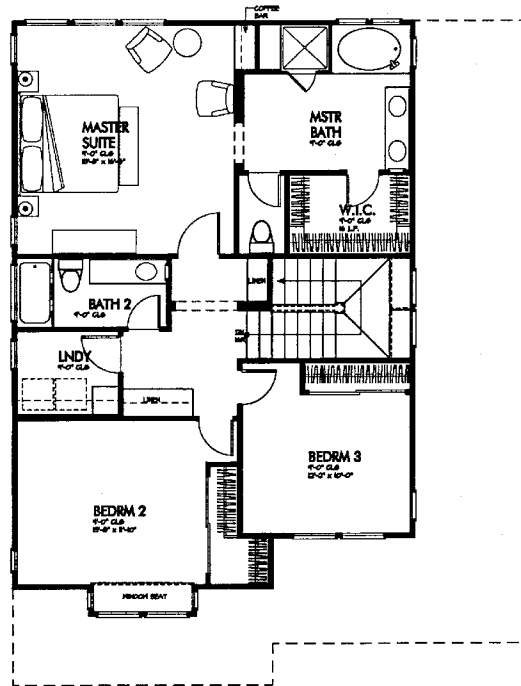
HAYWARD, CALIFORNIA



ROOF PLAN "A"

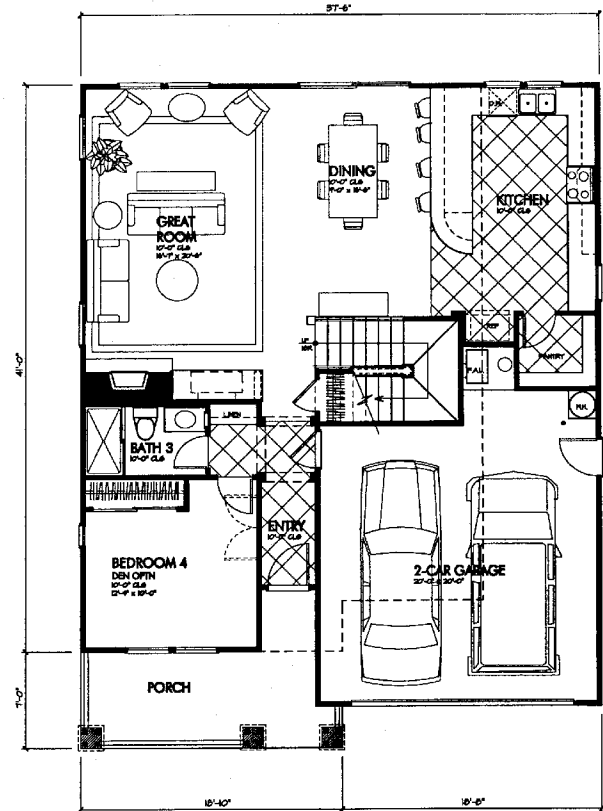


ROOF PLAN "B"



SECOND FLOOR PLAN "A"

186 sq. ft.
TOTAL: 2287 sq. ft.



FIRST FLOOR PLAN "A"

181 sq. ft.
TOTAL: 2287 sq. ft.

FLOOR PLANS PLAN ONE

0 4 8 16
September 17, 2004 Project No.: 852.902

DAHIN GROUP
ARCHITECTS

2671 Crow Canyon Rd.
San Ramon, CA 94583
925.837.8786
925.837.2543 fax

CHABOT ESTATE HOMES

HAYWARD, CALIFORNIA



FRONT ELEVATION "B"

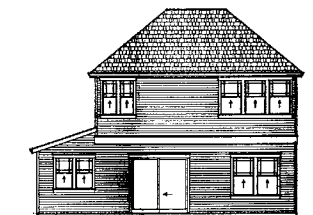


FRONT ELEVATION "A"



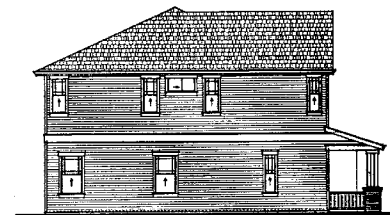
RIGHT ELEVATION "A"

SCALE: 1/8" = 1'-0"



REAR ELEVATION "A"

SCALE: 1/8" = 1'-0"



LEFT ELEVATION "A"

SCALE: 1/8" = 1'-0"

CHABOT ESTATE HOMES

HAYWARD, CALIFORNIA

ELEVATIONS PLAN ONE



January 12, 2005

Project No.: 852.202

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A.2
of 5